

ARMY GROUND RISK-MANAGEMENT PUBLICATION

COUNTERMEASURE

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MAY 1999

POV
Injuries
59
THRU MAR FY 99

OV FATALITIES
58
THRU MAR FY 98

DISTRIBUTION STATEMENT A
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As the confident, self-assured 21-year old Specialist leaves the lights and sounds of the party, the night closes around him. He gets on his motorcycle, leaves his helmet strapped to his bike, and begins his journey through the lonely darkness. His vision is blurred by the darkness and the alcohol he has had. A twist of the throttle and the speed builds as he fixes his face against the wind and the night. For him, it is one of those heavenly nights that cannot end. But, the night ends and unfortunately...so does the life of the Specialist.

This profile is from the information gathered from Army accident reports of motorcyclist fatalities. In order to keep our soldiers alive, they must be given hands-on training and made aware of safe cycling practices. We must remain safety conscious day and night, on and off duty, 24 hours a day. It only takes a second of inattention or miscalculation for them to find themselves . . .

Rushing To Die!

ARMY GROUND RISK-MANAGEMENT PUBLICATION

COUNTERMEASURE

The Official Safety Magazine for
Army Ground Risk-Management

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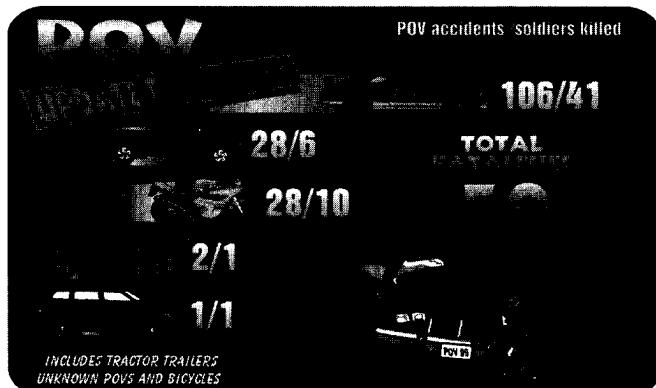
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Charles M. Burke
Brigadier General, U.S. Army
Commanding Officer

MAY 1999 COUNTERMEASURE

From The Editor

A Repeat Story

The number of soldiers killed in motorcycle accidents is following an all too familiar pattern of the past. In FY98, 13 soldiers were killed in motorcycle accidents. That's 7 more than the previous year. Already in FY99, we have 13 fatalities and we are barely past mid-year! We need to get serious! Here are some of the unfortunate motorcycle accidents that keep reoccurring:

■ SPC was killed when his motorcycle struck a legally-parked vehicle.

■ SPC, an experienced motorcyclist, was killed when his motorcycle slid on a curve that had gravel and sand. He was thrown face first into a rock formation.

■ SPC, wearing proper reflective vest and helmet, was killed when a POV failed to yield the right-of-way to his motorcycle. Soldier was thrown 30 feet.

■ Cadet suffered fatal head injuries when another vehicle pulled in front of her motorcycle, failing to give her the right-of-way. She attempted to stop, but skidded into the vehicle.

■ PFC was riding his motorcycle too fast for the road conditions. While attempting to make a turn, he lost control of his vehicle, dropped it to one side and collided with an approaching truck in the oncoming lane. Soldier and civilian passenger died instantly.

■ SGT was driving his motorcycle approximately 100 mph when he lost control and was fatally injured on impact.

■ SPC attempted to swerve his motorcycle out of the path of a vehicle making a left-hand turn. He ran off the road into a commercial sign and was thrown into a utility pole.

When a 3,000-pound car and a 400-pound motorcycle and rider meet, the loser is obvious. Steel and asphalt versus skin and bone is an unfair fight. Although motorcycles afford little crash survivability, proper protective gear can contribute to saving lives and reducing injuries.

In some of the accidents, neither drugs nor alcohol can be blamed. The soldiers were either exceeding posted speeds, going too fast for road conditions, or just not paying attention.

Sometimes a motorcycle accident isn't the

rider's fault. A motorcyclist has no guarantee that others will see him. The only eyes he can really count on are his own; he must always be alert.

To operate a motorcycle safely requires skill, dexterity, knowledge, and constant attention. If you're thinking, "It's like riding a bicycle, you never forget how," you're mistaken. Each bike is different, whether it concerns braking, acceleration, stability, grip, or ergonomics. It takes time to get familiar with new equipment. An important point to make is if it has been several weeks or months since you have ridden a motorcycle, practice your skills in an uncongested area before going into heavy traffic. And remember, each motorcycle driver is required to complete a motorcycle safety course.

More and more Army motorcyclists are learning that if they follow regulations, attend

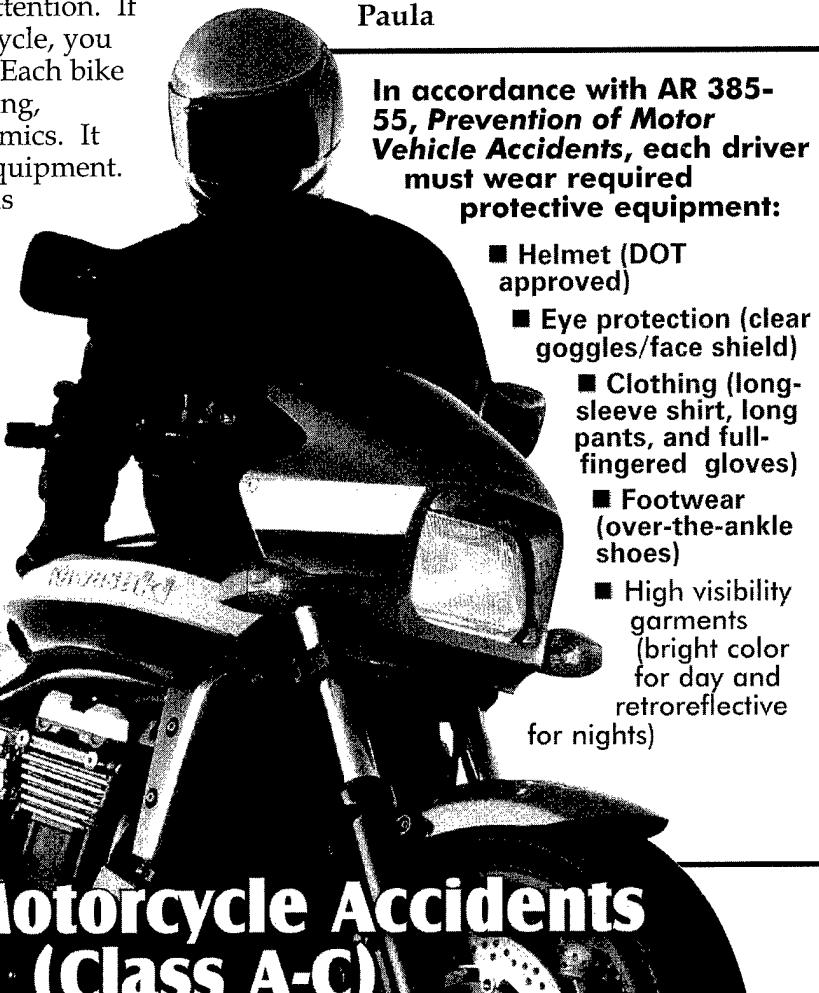
training, wear the proper protective equipment and ride defensively, they will be able to enjoy motorcycle riding for a long time...and not keep repeating the same ol' story.

Safety First!

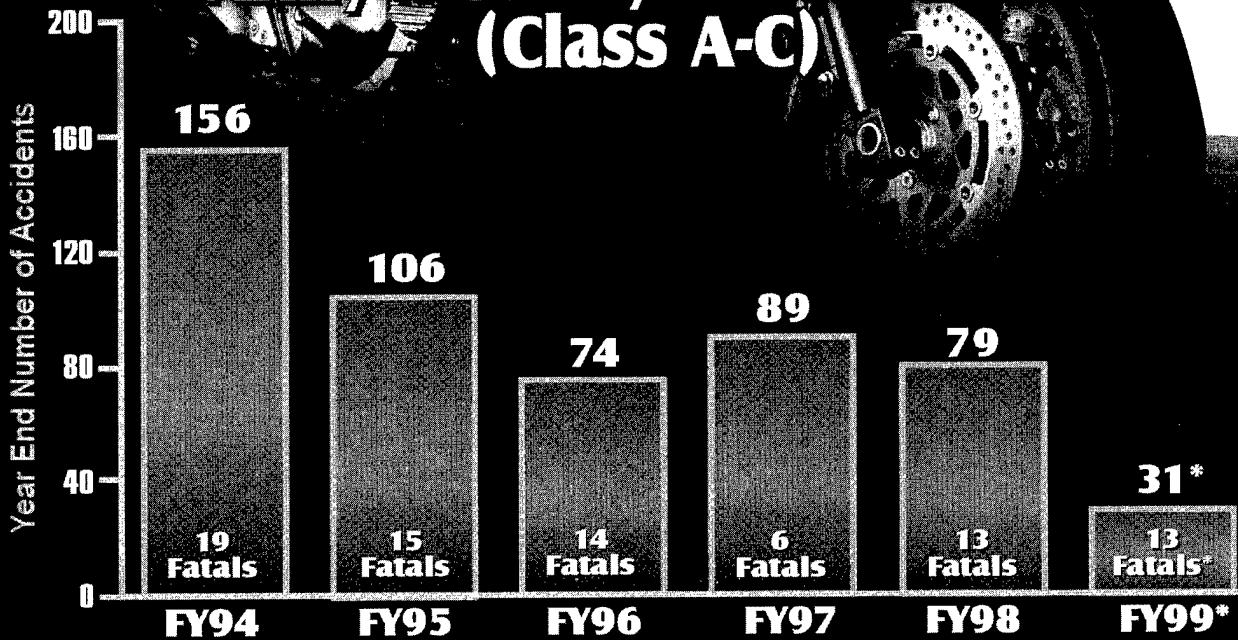
Paula

In accordance with AR 385-55, *Prevention of Motor Vehicle Accidents*, each driver must wear required protective equipment:

- Helmet (DOT approved)
- Eye protection (clear goggles/face shield)
- Clothing (long-sleeve shirt, long pants, and full-fingered gloves)
- Footwear (over-the-ankle shoes)
- High visibility garments (bright color for day and retroreflective for nights)



Army Motorcycle Accidents (Class A-C)



*Totals as of 16 April 1999

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Everyone Liked Fred

Fred was one of those guys everyone liked. He was always cheerful, active, and motivated on the job. Fred just seemed to enjoy life as it came. He was a sharp soldier and a new husband. He could hardly wait until the weekend so he could drive the two hundred miles to see his bride. She was still living with her parents until she and Fred could save enough money for her to move down.

To further save money, Fred bought an older motorcycle, which made the most of a gallon of gas. It needed some work but it served its purpose. He liked the feeling of freedom when the air rushed across his crew-cut hair. There were no helmet laws in his state, so Fred would discard his as soon as he left the post.

Fred never drove the motorcycle when there was a vehicle safety inspection prior to a long weekend. He knew the broken turn signal, worn front tire, and cracked mirror would not pass.

His buddies all helped cover his transportation needs on such days. After all, everyone liked Fred.

Fred was 21 years old. He had just been promoted to Specialist and had passed the milestone of three years in the Army. He was conscientious, knew his job, and thoroughly enjoyed the adventure of being in the Army. He was doing well. Everyone liked Fred.

Fred, however, did have some problems. His carefree attitude had netted him four speeding tickets during the last three months. His platoon sergeant knew of them and wanted to help Fred. Also, Fred liked a beer or two and had gotten into some trouble while visiting his young wife at home. It seems he was picked up for driving under the influence one weekend with a BAC of .08, just over the limit. Since the incident occurred in the next state, it missed the local blotter report, but some of his buddies still knew. The additional strain of the \$1000 fine made the financial

Special Analysis: Correlation between fatal POV accidents & holiday periods

Where are we at risk??

- 4-Day Holiday: .57 fatalities/day
- Weekend: .51 fatalities/day
- 3-Day Holiday: .39 fatalities/day
- Workday: .23 fatalities/day

Most Deadly Days

- Friday: .84 fatalities/day
- Saturday: .55 fatalities/day
- Sunday: .48 fatalities/day
- Monday: .42 fatalities/day

Top 4 Deadly Holidays

- Independence Day 1.00 fatality/day
- Labor Day 0.90 fatalities/day
- Memorial Day 0.75 fatalities/day
- Columbus Day 0.70 fatalities/day

situation that much more difficult.

The First Sergeant and the Company Commander were safety conscious; attending each safety council meeting, trying to identify hazards, and displaying a genuine concern for the troops' welfare. They had seen the post statistics. They knew that POV accidents were the number one killer of soldiers. They knew that statistically the highest POV mortality rate was at the Specialist level. They also knew that the majority of fatal accidents occurred to 21-year old male service members and that these accidents usually happened over a 4-day holiday. Additionally, the Army statistics showed that POV accident fatalities were more likely to occur to those riding motorcycles and State statistics showed that the likelihood of being killed increased dramatically when the victim was not wearing a helmet.

Well, one Thursday afternoon, beginning a four-day weekend, Fred became one of the statistics. He had a couple of beers with his buddies, ditched his helmet, and was on his way. The sun was going down, Fred was headed

West at a high rate of speed, and tried to pass a slow-moving vehicle still accelerating from a stop sign. Fred's signal didn't work, he didn't notice the accelerating car in his broken mirror, and he was clipped as he attempted to dart back into the right lane. His motorcycle went out of control. Fred received massive head injuries after striking the curb. It took him three days to die.

Everyone was shocked. How could this have happened to such a great guy? Everyone liked Fred. He seemed so professional. Why him?

If you add the factors of personal financial problems, a history of aggressive behavior, drinking and driving, plus the desire to get home on the weekends, you realize it doesn't take a rocket scientist to see trouble ahead.

Nobody put it all together.

Risk management is both a science and an art. It applies to much more than just our daily soldier activity, field problems, ranges, and deployments. It is identifying hazards and implementing control measures. In this case, identifying the high-risk driver could have made all the difference. Putting the pieces together to identify the high-risk environment and factors could have possibly prevented this accident. The Safety Center Homepage (<http://safety.army.mil>) offers the unit safety officer or NCO a toolbox for reducing POV accidents. It is for your use. Build your own program. Be innovative. Be positive. Help the "Fred" in your unit.

The 1st Aviation Brigade at Fort Rucker recently had a successful program that helped to identify the high-risk driver by having each soldier fill out a simple survey. Each soldier completed the survey while processing into the unit. It was updated annually or as required. Age, rank, sex, driving record, and other factors were each given a value. The values were based

on post POV accident statistics. The values then were totaled. The higher the total, the more at risk the soldier. If personal problems came up, they too were added into the equation. Once identified as a high-risk driver, the soldier was subject to a number of control measures, ranging from remedial driver training (which reduced the total) to finding alternate forms of transportation. Direct supervision and an involved chain of command were the main reasons this unit had a successful POV program.

Help identify the Fred in your unit.
Help prevent the preventable. ♦

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Minimizing The Effects Of Jet Lag

Although this article is written from a combat point of view, the subject matter and conclusions reached are timely for both military and civilian personnel when traveling.

Mission readiness is not an arbitrary concept or a lofty goal of today's Army leaders. It is the cornerstone of our success. The ability to deploy and then operate effectively with purpose and confidence is critical to mission success and the safe return of our forces.

Because soldiers are deploying more frequently, leaders continually are challenged to minimize or eliminate the threats associated with these deployments so that their soldiers can perform optimally when called upon.

Pre-deployment planning is crucial for commanders to identify potential hazards and develop controls. These hazards can range from traversing rough terrain to insufficient pre-deployment rehearsal time. Other hazards not so obvious include fatigue from long hours of preparation, sleep deprivation, and the stress of leaving familiar surroundings. The latter is expected and most commanders hope that the travel time will help to "recharge" weary soldiers before they arrive at their destinations and begin the mission. However, often overlooked is how jet lag may affect the soldier and the continuation of the mission once he arrives at the mission site.

What are the Symptoms of Jet Lag?

After traveling across several time zones, soldiers may experience feelings of malaise, gastrointestinal disturbances, and disrupted sleep schedules. These symptoms may still allow a soldier to function, but studies have shown that a reduction in work efficiency is likely to occur. For some, jet lag may last up to two weeks.

What Can You Do Prior to Deployment?

Prior to deployment, soldiers can adjust their sleep schedule to that of their destination. The shift in sleep-wake cycle depends on such factors as the direction of travel, the amount of advanced notice that they receive, and the number of time zones the unit will cross to reach their destination. For example, adjusting sleep

schedules should begin no earlier than three days prior to departure.

Soldiers involved in this pre-adaptation regimen should have access to finance and personnel services, meals, etc., so that they are more apt to follow prescribed guidelines. Family members and friends also should support this pre-deployment sleep-wake cycle.

Another important factor in adapting to the destination time zone (prior to and upon arrival) is scheduling exposure to daylight and/or artificial light. Daylight exposure influences alertness, body core temperature, and hormone production. Avoiding daylight (or equivalent), either utilizing sleep-wake cycles or by using dark sunglasses, helps to speed up resynchronization and sustain mission readiness.

Where Can You Find More Information?

The *Leader's Guide to Crew Endurance*, a joint publication by the U.S. Army Aeromedical Research Laboratory and the U.S. Army Safety Center, gives guidance that can help minimize risk factors which decrease human performance and mission accomplishment such as jet lag. This publication is available to commanders and unit safety planners at the U.S. Army Safety Center's web site, <http://safety.army.mil/pages/tools/index.html>.

Conclusion

As soldiers are deploying more frequently, the necessity to perform effectively upon arrival is still tantamount to sustaining mission readiness and success. Leaders must utilize all resources available to them to ensure soldier readiness. The requirements for discipline, training, and motivation of soldiers have not changed. But remember, no amount of discipline, training, or motivation can entirely overcome the effects of jet lag and sleep loss. ♦

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Powered Industrial Truck Operator Training Standard

Effective 1 March 1999

The Occupational Safety and Health Administration's (OSHA) final forklift regulation is now in effect. The final rule mandates vehicle and environmental training topics for employees in general industry, construction, shipyards, marine terminals, and longshoring operations.

According to the final rule, training must consist of both classroom instruction and hands-on application. No employee may operate a powered industrial truck without direct supervision until the employer certifies that the operator has passed both classroom and hands-on training. Hands-on training must be on the particular lift the employee will eventually operate.

The following topics must now be included in training:

- Fundamentals of powered industrial trucks
- Operating environment
- Powered industrial truck operation
- Operational training practices
- Testing, retraining and enforcement

The compliance dates by which powered industrial truck operators must be trained are as follows:

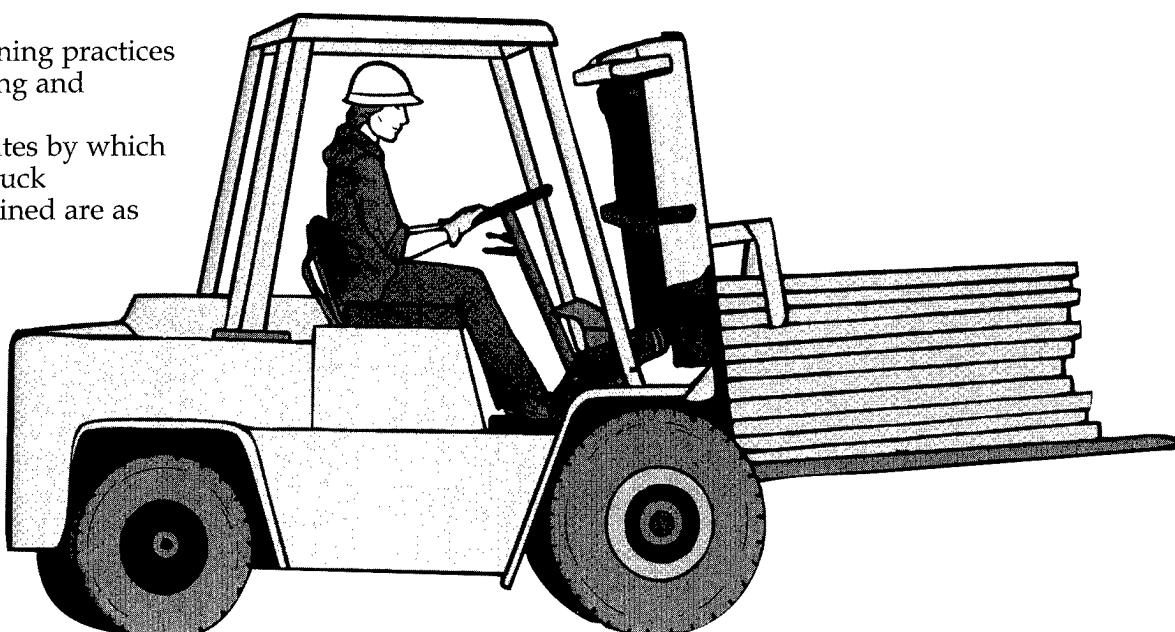
- If the employee was hired before December 1, 1999, the initial training and evaluation of that employee must be completed by December 1, 1999.

- If the employee was hired after December

1, 1999, the initial training and evaluation of that employee must be completed before the employee is assigned to operate a powered industrial truck.

The Safety Center has forklift operator training materials available to help you with the required classroom instruction. You can download the MS PowerPoint presentation and MS Word files by going to the Safety Center Home Page:
<http://safety.army.mil>. Once there, select "Training" from the top tool bar. Next, select "Sample Training Material From The Field." Then, under the section "Sample OSHA Compliance Training," select "Forklift Operations" and download these files to your computer. ♦

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Munitions Safety

"Beware, The Buck May Stop With YOU!"

A live 105-millimeter shell exploded and killed a scrap metal worker as he was attempting to dismantle it with a torch.

This unfortunate death occurred as the employee was preparing to separate the steel body from the aluminum portion of the round. It exploded causing his death and serious injuries to three other co-workers. The 105mm live round was sold inadvertently as scrap metal to a local scrap metal yard.

The actions leading to this unfortunate incident provide an important lesson for all personnel—military and civilian—of the consequences of not following regulatory guidance and the liability that may be incurred as a result.

BACKGROUND

The story of how a 105mm live round got to the scrap yard began at the training site more than 20 years ago.

Although the round was fired downrange, it did not detonate. Two years later, the unexploded ordnance (UXO) was collected as part of range cleanup operations. A civilian company, hired to perform this mission, deemed the round safe or with no apparent sign of danger and loaded it on a truck along with other items suitable for scrap. It became part of the thousands of pounds of scrap metal located at the installation's scrap metal yard.

Eventually, the time came to sell and dispose of all scrap at the yard. The bids were presented and the winning bid took the "certified safe material" to their local yard for processing. It was here that the unfortunate accident occurred and the following chain of events resulted:

■ The local district attorney's office charged the supervisor in charge of certifying the material safe and free of any explosive or dangerous

content with second-degree murder.

■ The local scrap yard owner was forced to close his business and has now filed civil action against the company employed to cleanup ranges and may file legal action against the Department of Defense (DOD).

■ The mother filed legal action for her son's wrongful death.

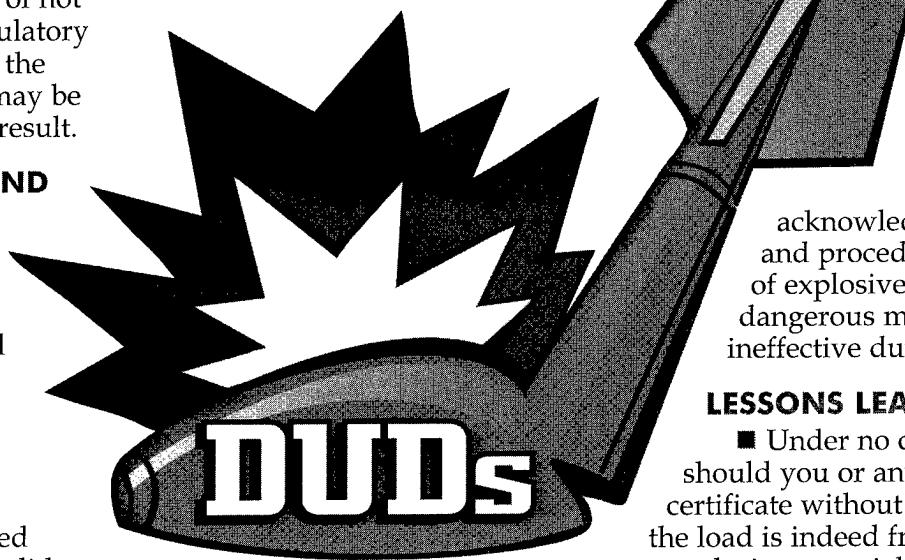
■ The Army Corps of Engineers conducted an extensive search of the scrap metal yard at an estimated cost of more than one million dollars. During the search, at least 55 other explosive devices were found.

■ DOD

acknowledged that policies and procedures for disposal of explosives and other dangerous material were ineffective during this incident.

LESSONS LEARNED

■ Under no circumstances should you or anyone sign a certificate without first ensuring that the load is indeed free and clear of any explosive material. To certify that ammunition is in safe condition means exactly that. Understand that you may be civilly (and in rare instances, criminally) liable for the unsafe practices of individuals under your supervision; therefore, enforce the standard. If you are the person responsible for certifying that residue was inspected and that contents do not contain any live rounds, unfired primers, explosives, or other dangerous materials—ensure that it is done. Remember that live ammunition turn-ins also must contain a statement certifying that all ammunition received were either expended or turned in. Additionally, a statement certifying any residue shortages that exceed the allowable losses specified in Appendix L, DA Pam 710-2-1, *Using Unit Supply Manual Procedures*, is signed by the first lieutenant colonel in the chain of command.



■ UXOs are no game. They are deadly and should never be handled by unqualified personnel. Ensure that you follow all safety procedures as described in FM 21-16, *Unexploded Ordnance Procedures*. Military personnel (and certain DOD contractors) risk injury or death from UXO if they fail to follow this manual. Therefore, all personnel need to understand how to identify, report, mark and if necessary, apply protective measures against UXO. All military and contractor personnel involved in range cleanup operations should know and be familiar with this publication.

■ Ensuring that proper procedures are followed is the inherent responsibility of all personnel associated with the handling of munitions. A safety briefing should be conducted in accordance with your unit's standard operational procedure prior to any handling of munitions or explosives. Additionally, TM 9-1300-206, *Ammunition and Explosive Safety Standards*, Chapter 1, Paragraph 1-4e, explains the responsibilities for enforcement of and compliance with safety regulations pertaining to the handling of explosives. All leaders must take appropriate actions using all safety publications and the risk-management process to institute safety requirements for explosives that control potential hazards. Remember that the absence of a safety requirement in the regulations or in the references cited does not necessarily indicate that no safeguards are needed.

■ Explosive ordnance personnel should ensure all material at the ranges are identified properly and certified safe for handling. As a safety precaution, all installation contractors should consult Explosive Ordnance Disposal (EOD) prior to cleanup operations. Additionally, contracting officials should ensure that personnel used by contractors have adequate knowledge of the dangers involved in the handling of unexploded ordnance.

It is evident that our safety procedures in this case failed to prevent an unsuspecting person from becoming a fatality. It is imperative that we understand and put into effect—in all activities—hazard identification and the risk-management process:

- Identify the hazards involved in all operations. (As it applies to this case, pay particular attention to explosive safety requirements.)
 - Assess the hazards once identified.
 - Develop controls and make risk decisions.
- Do the benefits outweigh the potential cost?
- Implement controls that eliminate or

control the risk.

● **SUPERVISE AND EVALUATE.** There is little to gain if you recognize the potential dangers and you do not do anything to ensure controls are properly implemented and effective. Do not forget to evaluate the measures taken.

CONCLUSION

The causes of this accident revealed the following facts:

● **Individual error.** The worker failed to take appropriate action. If he had identified the hazards, he would have recognized the potential for a UXO to land in the scrap yard.

● **Leader error.** The supervisor did not develop controls to ensure that all scrap metal was free of explosive material. Had the supervisors checked to verify the tasks were accomplished as required, the incident might not have happened. Furthermore, other responsible agencies such as the EOD could have contributed by ensuring contractors understood the seriousness of handling UXOs during cleanup operations.

We, in the Army, are constantly exposed to a multitude of hazards. However, we must ensure that operations involving munitions and explosives receive special attention. Remember to use the risk-management process and when in doubt, consult your installation safety office. Don't become a victim of unsafe practices.

Also, understand that legally you may be liable for the unsafe practices of people whom you supervise or direct. The excuses, "I didn't know" or "That isn't my responsibility" may not suffice if you "could have" or "should have" known about the violation of safety procedures. Know your job, understand your responsibilities, and in the process you'll help integrate the Army's safety objective of force protection into doctrine, training, materiel acquisition, sustainment, and combat.

The supervisor in this particular incident was charged with second-degree murder; but instead, the court ordered that he be tried for involuntary manslaughter in connection with the accident. The assistant district attorney said, "We felt that within the management [of scrap metal removal off base], you had one person who had responsibility, one person who was in control of the yard and who signed the certification that the scrap metal was safe—and the buck stopped with him." **Don't let the buck stop with you!** ♦

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From The Troops

Applying Risk Management In The Field

This section of *Countermeasure* is intended to provide a way for units throughout the Army to share risk-management ideas. Publication in *Countermeasure* does not constitute endorsement by the Safety Center.

Our goal is to make it easy to exchange information that will expand understanding and application of risk management in training and operational environments, as well as off duty. The success of this forum for exchange of risk-management information will depend on input from you. Send us your ideas and lessons learned by e-mail: countermeasure@safety-emh1.army.mil, fax: 334-255-9528, or regular mail: Commander, U.S. Army Safety Center, ATTN: CSSC-OG (Countermeasure), Bldg. 4905, 5th Ave., Fort Rucker, AL 36362-5363.

I am a "seatbelt survivor." It was a sunny day last April at Fort Hood, Texas, when a seatbelt saved my life.

The day had begun way too early with an Army Physical Fitness Test (APFT). I had left the house that morning about 5 a.m. to take the APFT with my unit. I had a busy day of staff meetings and office work when I realized that it was time to call it a day.

I took the same monotonous route home that I had taken for the past several months. The traffic was moving swiftly and I was glad to be off work. I was driving my wife's small compact convertible with the top down and the

radio on. I was traveling in the left hand lane on an undivided four lane road when another car pulled out from a side street, crossed two lanes of traffic, and stopped directly in front of me. I looked in my right-side mirror and saw there was no way out. I immediately laid on the brakes and the car began to skid.

The next thing I remember was hearing my stuck horn blowing and looking at the just-deployed airbag drooping from the steering wheel in front of me. People immediately began rushing to my aid as well as to the aid of the driver in front of me.

Luckily, I was uninjured except for a slightly sprained left wrist. Thank God, I was wearing my seatbelt and my small car was equipped with an airbag. The driver of the other vehicle was not as fortunate. She sustained significant injuries because she was not wearing a seatbelt and her older car was not equipped with an airbag. This unfortunate accident is all too common on today's highways. One moment of inattention or misjudgment can have life-changing consequences.

In a POV accident, your best countermeasure is a seatbelt that is fastened properly. I have stressed this point many times as the unit safety officer and on that day, I am convinced that following my own advice saved my life. ♦

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The soldier that was driving this vehicle is alive today because seatbelts and an airbag saved his life.

Asbestos Advisory

Gaskets on the HMMWV-series vehicle 6.2 liter engine can contain up to 75 percent asbestos. Maintenance personnel who mechanically grind off these gaskets can exceed the Occupational Safety and Health Administration (OSHA) standard for airborne asbestos fibers. As an interim control, mechanics must don respiratory protection equipped with high-efficiency particulate air filters (HEPA) when grinding gasket material until appropriate engineering controls and work procedures are instituted.

Recommendations:

After steam cleaning engine parts, remove gasket materials as much as feasible by hand scraping. If gaskets are completely removed by this method, airborne asbestos fibers will be controlled. However, if this is unpractical, the following applies:

- Don respiratory protection equipped with HEPA filters when mechanically removing any gasket material.
- Install a local exhaust ventilation booth and require any mechanical gasket removal to be performed in this booth.
- Institute a training program for all employees who are exposed to airborne concentrations of asbestos at or above the time-weighted average (TWA) and/or excursion limit and ensure their participation in the program (see note).

■ Provide clean protective clothing and equipment at least weekly to each affected employee. Laundering of contaminated clothing shall be done so as to prevent the release of airborne fibers of asbestos in excess of the permissible exposure limits. Contaminated clothing shall be transported in sealed impermeable bags or other closed impermeable containers and labeled.

NOTE: The OSHA Code of Federal Regulation 1910.1001 states the employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fiber per cubic centimeter of air as an 8-hour TWA. Also, the employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air as averaged over a sampling period of 30 minutes (excursion limit).

- Ensure that employees who work in this area shower at the end of the work shift and do not leave the work place wearing clothing or equipment worn that day.
- Ensure that employees do not enter lunchroom facilities with protective work clothing or equipment unless surface asbestos fibers have been removed. ♦

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Branch Reps Have New Phone Numbers

The Safety Center Ground Systems Division has a lot of new folks on board. In our continuing efforts to keep *Countermeasure* relevant to your needs and interests, we ask you to contact our professional staff if you have questions, ideas, or comments. We truly want to know how we can serve you better. DSN is 558-xxxx; commercial is 334-255-xxxx.

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"NOW TELL ME AGAIN WHY YOU'RE SELLING
THE MOTORCYCLE?"